

NOT FOR PUBLICATION

**UNITED STATES DISTRICT COURT
DISTRICT OF NEW JERSEY**

**INDUSTRIAL TECHNOLOGY
RESEARCH INSTITUTE,**

Plaintiff,

V.

**LG ELECTRONICS INC. &
LG ELECTRONICS U.S.A., INC.,**

Defendants.

Civil Action No. 12-949 (ES)

OPINION

SALAS, DISTRICT JUDGE

I. Introduction

Before the Court is the parties’ request for claim construction of certain disputed terms in this patent infringement action. The Court held a technology tutorial hearing on September 20, 2013 and a two-day *Markman* hearing on October 10 and 11, 2013. This Opinion sets forth the Court’s construction of the disputed claim terms.

II. Background

In November 2010, Plaintiff Industrial Technology Research Institute (“Plaintiff” or “ITRI”) brought this patent infringement action against Defendants LG Electronics Inc. and LG Electronics U.S.A., Inc. (collectively, “Defendants” or “LGE”) in the Eastern District of Texas. (D.E. No. 1).¹ In February 2012, the Eastern District of Texas transferred the action to this Court. (D.E. Nos. 116 & 117).

¹ ITRI also named LG Corporation as a defendant, but the parties later jointly stipulated to LG Corporation's dismissal, with prejudice, from this action. (D.E. No. 147).

ITRI alleges infringement of the following three patents: U.S. Patent Nos. 6,324,150 (the “’150 patent”); 7,672,198 (the “’198 patent”); and 7,542,384 (the “’384 patent”). (D.E. No. 67, Second Amended Complaint, Counts I-III). ITRI’s infringement allegations generally relate to LGE’s optical disc drive devices, including products bearing optical pickup heads, such as the “BD590 Blue-Ray Disc Player,” the “GP08LU30 Optical Media Super-Multi Rewriter,” the “LG Portable Super Multi Drive GP08LU30,” and other similar products. (*Id.* ¶¶ 16, 25, 34 (alleging infringement of the ’150, ’198, and ’384 patents)).

Pursuant to Local Patent Rule 4.5, the parties submitted *Markman* briefing, identifying several terms from the three patents for the Court to construe. (D.E. Nos. 170, 178, 183, 184). Recently, however, this Court granted LGE’s motion to partially stay this action pending *inter partes* reexamination of the ’198 patent. (D.E. No. 229). Having conducted a technology tutorial and a *Markman* hearing, the Court hereby construes the disputed claim language from the ’150 and ’384 patents.

A. The ’150 Patent

The ’150 patent relates to a certain optical pickup head that “utilizes several laser beams of different wavelengths for reading or writing data on different kinds of optical disc.” (’150 Patent at 1:6-9). The “primary objective of the . . . invention is to provide an optical pickup head which utilizes two or three laser beams of different wavelengths for reading or writing data on different kinds of optical recording media through a same optical output path.” (*Id.* at 2:25-29).

According to the invention, a “beam shaper” permits laser beams of different wavelengths to be “shaped into a same optical output path for reading and writing data from optical recording media” and is the “key” to the ’150 patent. (*Id.* at Abstract & 2:30-40; 10/10/13 Tr. at 35:4-22).

The embodiment depicted in Figure 6 of the '150 patent is illustrative and is reproduced herein with certain components identified:

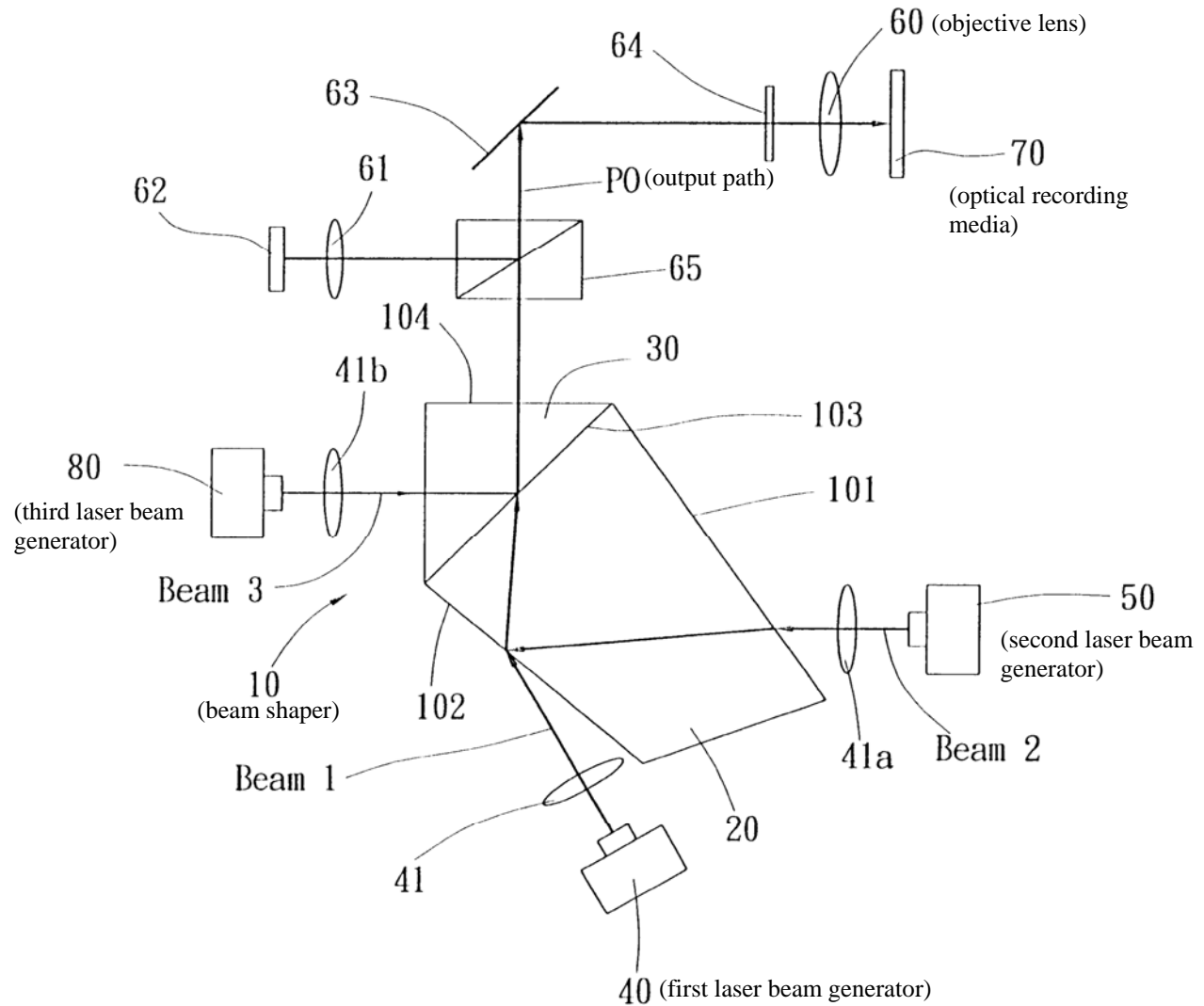


FIG. 6

As evident from the parties' *Markman* briefing and oral argument, Claim 9 of the '150 patent is the only claim-at-issue and appears as follows:

9. An optical pickup head using multiple laser sources of different wavelengths for reading/writing data on optical recording media of varying densities, comprising:

a first laser beam generator and a second laser beam generator, for generating a first laser beam and a second laser beam of different wavelengths, respectively;

a beam shaper, allocated in optical paths of said first and second laser beams, and formed with a plurality of planes locating in different angles, comprising:

an incident laser plane for refracting said second laser beam, to generate a refracted second laser beam;

a first beam-composing interface for composing said refracted second laser beam with said first laser beam into an optical output path;

a second beam-composing interface for composing said first and second laser beams,

after they are being composed by said first beam-composing interface, with a third laser beam into said optical output path;

an objective lens for focusing laser beams in said optical output path onto said optical recording media as an reading/writing spot; and

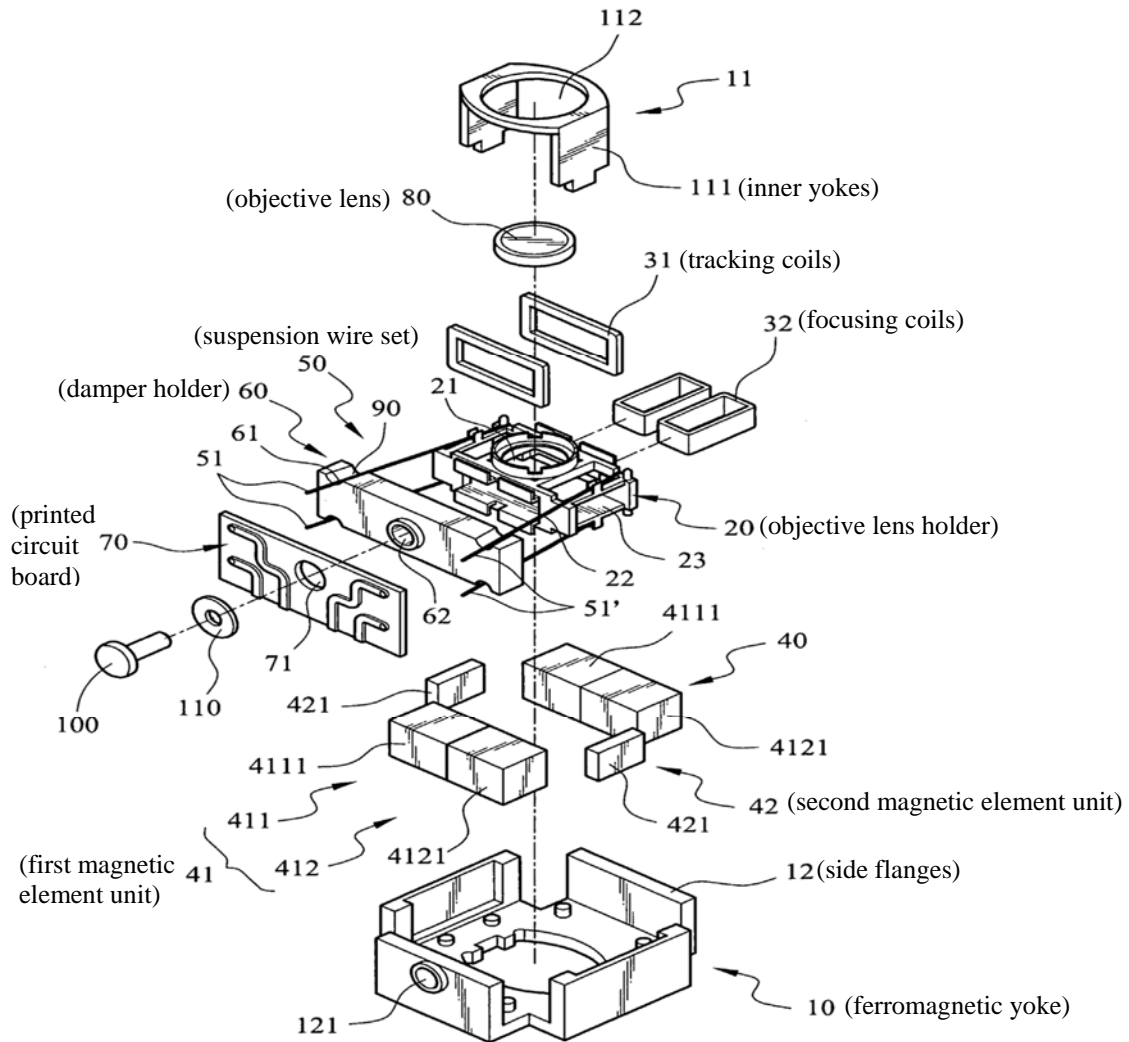
a photo detector for transforming a reflective laser beam returning from said optical recording media into corresponding signals and accomplishing data retrieval;

wherein said third laser beam is an incident laser beam generated by a third laser beam generator, refracted to said second beam-composing interface and composed into same optical output path.

B. The '384 Patent

The '384 patent “relates to an objective lens actuator for controlling and driving an optical pickup head” wherein “the primary object of the . . . invention is to provide an objective lens actuator to control the focusing direction, tracking direction and tilt direction of the pickup head.” (1:13-14, 1:47-50). To achieve this object, the objective lens actuator uses a variety of components, including “a ferromagnetic yoke, an objective lens holder, tracking coils, focusing coils, a magnetic element set, a suspension wire set, a damper holder and a printed circuit board.” (*Id.* at 1:51-55).

The embodiment depicted in Figure 1 of the '384 patent is illustrative and is reproduced herein with certain components identified:



As evident from the parties' *Markman* briefing and oral argument, Claims 12 and 18 of the '384 patent are the only claims-at-issue. Claim 12 is illustrative and appears as follows (with textual modifications identified pursuant to a Certificate of Correction):

12. An objective lens actuator, comprising:

a ferromagnetic yoke including two inner yokes;

an objective lens holder movably located on the ferromagnetic yoke corresponding to the inner yokes for holding an objective lens;

two tracking coils and two focusing coils which are respectively located on two opposite sides of the objective lens holder and

located on the other two opposite sides of the objective lens holder and surrounded with the two inner yokes;

a magnetic element set located on the ferromagnetic yoke corresponding to the tracking coils and the focusing coils to generate a magnetic field perpendicular to the optical axis of the objective lens;

a suspension wire set connecting to the objective lens holder, the tracking coils, and the focusing coils to hang the objective lens holder and channel current to the tracking coils and the focusing coils;

a damper holder located on the ferromagnetic yoke to allow the suspension wire set to pass through; and

a printed circuit board located on the damper holder and surrounded with the suspension wire set to provide the current to the tracking coils and the focusing coils to drive the objective lens holder,

wherein the magnetic element set includes a first magnetic element unit and a second magnetic element unit, the first magnetic element unit having a magnetic flux direction parallel with a normal direction of the an area which the tracking coils surround, the second magnetic element unit corresponding to the focusing coils and having a magnetic flux direction perpendicular to the first magnetic element unit, and

wherein the first magnetic element unit includes a first portion and a second portion, the first portion having two opposing first magnetic elements, the second portion having two opposing second magnetic elements, the magnetic flux direction of the first magnetic elements from the N pole to the S pole being coincided with the direction from the ferromagnetic yoke to the objective lens holder, the magnetic flux direction of the second magnetic elements from the N pole to the S pole being coincided with the direction from the ferromagnetic yoke to the objective lens holder, the second magnetic element unit including two third magnetic elements that have a magnetic flux direction from ~~the~~ the ferromagnetic yoke to the objective lens holder.

III. Legal Standard

“It is a bedrock principle of patent law that the claims of a patent define the invention to which the patentee is entitled the right to exclude.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (internal quotations omitted). “When the parties present a fundamental dispute regarding the scope of a claim term, it is the court’s duty to resolve it.” *O2 Micro Int’l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1362 (Fed. Cir. 2008).

“[T]he words of a claim are generally given their ordinary and customary meaning” which is “the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention.” *Phillips*, 415 F.3d at 1312-13 (internal quotations omitted). “In some cases, the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the widely accepted meaning of commonly understood words.” *Id.* at 1314.

But, to determine the ordinary and customary meaning of claim language that has a “particular meaning in a field of art,” the court looks to ““those sources available to the public that show what a person of skill in the art would have understood [the] disputed claim language to mean.”” *Id.* at 1314 (quoting *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1116 (Fed. Cir. 2004)). Thus, the court must “look to the claim language, the specification, the prosecution history, and any relevant extrinsic evidence.” *Meyer Intellectual Props. Ltd. v. Bodum, Inc.*, 690 F.3d 1354, 1368 (Fed. Cir. 2012); *see also Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996) (“In determining the proper construction of a claim, the court has numerous sources that it may properly utilize for guidance. These

sources . . . include both intrinsic evidence (*e.g.*, the patent specification and file history) and extrinsic evidence (*e.g.*, expert testimony).”).

With respect to intrinsic evidence, “the claims themselves provide substantial guidance as to the meaning of particular claim terms.” *Phillips*, 415 F.3d at 1314. Indeed, “the context in which a term is used in the asserted claim can be highly instructive.” *Id.* Similarly, “[o]ther claims of the patent in question, both asserted and unasserted, can also be valuable sources of enlightenment as to the meaning of a claim term.” *Id.*

Importantly, the specification “‘is always highly relevant to the claim construction analysis’” and “‘is the single best guide to the meaning of a disputed term.’” *Id.* at 1315 (quoting *Vitronics*, 90 F.3d at 1582). “[T]he specification may reveal a special definition given to a claim term by the patentee” or “may reveal an intentional disclaimer, or disavowal, of claim scope by the inventor.” *Phillips*, 415 F.3d at 1316. Indeed, “the specification necessarily informs the proper construction of the claims” and it is “entirely appropriate for a court, when conducting claim construction, to rely heavily on the written description for guidance as to the meaning of the claims.” *Id.* at 1316-17.

Notably, however, the court may “not read limitations from the specification into claims.” *Thorner v. Sony Computer Entm’t Am. LLC*, 669 F.3d 1362, 1366 (Fed. Cir. 2012). Specifically, the Federal Circuit has “repeatedly warned against confining the claims to . . . embodiments” described in the specification. *Phillips*, 415 F.3d at 1323.

The court must also consider the patent’s prosecution history—“the complete record of the proceedings before the PTO . . . includ[ing] the prior art cited during the examination of the patent.” *Id.* at 1317. Although the prosecution history “often lacks the clarity of the specification and thus is less useful for claim construction purposes,” it can nevertheless “inform

the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be.” *Id.*

In sum, “[c]laim terms are given their ordinary and customary meaning—the meaning that they would have to a person of ordinary skill in the art in light of the specification and prosecution history at the time of the invention.” *Woods v. DeAngelo Marine Exhaust, Inc.*, 692 F.3d 1272, 1283 (Fed. Cir. 2012). And, “[c]laim terms are properly construed to include limitations not otherwise inherent in the term only when a patentee sets out a definition and acts as his own lexicographer, or when the patentee disavows the full scope of a claim term either in the specification or during prosecution.” *Id.* (internal quotations omitted).

Finally, the court may also rely on extrinsic evidence—“which ‘consists of all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises.’” *Phillips*, 415 F.3d at 1317 (quoting *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 980 (Fed. Cir. 1995)). But, extrinsic evidence “is unlikely to result in a reliable interpretation of patent claim scope unless considered in the context of the intrinsic evidence.” *Phillips*, 415 F.3d at 1319.

IV. Construction of Disputed Claim Terms

A. Disputed Claim Terms in the '150 Patent

1. The three “optical output path” terms²

Terms	ITRI's Proposals	LGE's Proposals	Court's Constructions
“an optical output path”	<i>one or more paths into which laser beams travel after being shaped</i>	<i>a path into which a laser beam exiting the beam shaper travels</i> or <i>a path into which a laser beam coming out of the beam shaper travels</i>	<i>a path into which a laser beam travels after being shaped</i>
“said optical output path”	<i>the previously recited one or more optical output paths</i>	<i>the previously recited “optical output path”</i>	<i>the previously recited “optical output path”</i>
“same optical output path”	<i>the same one or more optical output paths as the previously recited one or more optical output paths</i>	<i>the previously recited “optical output path”</i>	<i>the previously recited “optical output path”</i>

ITRI argues that the “simple word ‘path’ has a widely understood meaning as a demarcated route for travel” and that “the term ‘optical output path’ refers to the specific route travelled by the laser beams leaving the beam shaper.” (D.E. No. 170, ITRI’s Opening *Markman* Brief (“ITRI Open. Br.”) at 6-7). ITRI contends that, in view of the specification, the term “path” incorporates the “concept of direction.” (*Id.* at 7 n.24). ITRI explains that LGE’s

² The parties’ proposed constructions were modified at the *Markman* hearing and are reproduced herein pursuant to their post-hearing joint submission. (D.E. No. 244-1 at 1; D.E. No. 244-2 at 1-2 & 2 n.2-3).

proposal contemplates a “singular delimited path”—but that “a” or “an” means one or more paths. (10/10/13 Tr. at 31:9, 43:10-12, 58:9-15). And ITRI argues that, although the figures seem to depict a single optical output path, both the Code of Federal Regulations and the Manual of Patent Examining Procedure provide that such figures are only simplistic depictions of embodiments and are not drawn to scale. (*Id.* at 12:10-13:5, 62:3-17).

ITRI also argues that LGE improperly imports a limitation from disclosed embodiments by proposing “exiting” or “coming out of.” (*Id.* at 56:18-58:8). Indeed, ITRI contends that Figure 6 shows that part of the output path is inside the beam shaper. (*See id.* at 107:19-110:15). Finally, as to the “said” and “same” terms, ITRI argues that LGE’s proposals imply that beams must travel in an “identical and/or overlapping path”—but that the ’150 patent does not contemplate any such identity or overlapping and, furthermore, that such travel would be impossible because the invention involves beams with different wavelengths. (D.E. No. 184, ITRI’s Responsive *Markman* Brief (“ITRI Resp. Br.”), at 8; 10/10/13 Tr. at 31:9-16, 33:6-34:13).

LGE argues, however, that the ’150 patent’s main goal “is to combine laser beams of different wavelengths into a single or common output path . . . as the beams exit the beam shaper.” (D.E. No. 178, LGE’s Consolidated Opening *Markman* Brief (“LGE Open. Br.”) at 5). LGE contends that “output” reflects the beams’ exit from the beam shaper because the beams must travel from inside the shaper to a disc. (*Id.* at 6). LGE maintains that ITRI’s proposal ignores the word “output” and that ITRI had initially agreed with the “exiting” portion of LGE’s proposal in ITRI’s opening brief. (*Id.* at 8; 10/10/13 Tr. at 53:17-54:10, 55:20-56:2). Finally, as for the “said” and “same” terms, LGE argues that an ordinary artisan would understand this to mean an identical “optical output path,” but suggests that adopting its proposal does not mean

that “a stray electron or a stray proton” or “a silly millimeter” difference would preclude such identity. (LGE Open. Br. at 5; 10/10/13 Tr. at 51:3-20).

“As a general rule, the words ‘a’ or ‘an’ in a patent claim carry the meaning of ‘one or more.’” *TiVo, Inc. v. EchoStar Commc’ns Corp.*, 516 F.3d 1290, 1303 (Fed. Cir. 2008). “That ‘a’ or ‘an’ can mean ‘one or more’ is best described as a rule, rather than merely as a presumption or even a convention.” *Baldwin Graphic Sys., Inc. v. Siebert, Inc.*, 512 F.3d 1338, 1342 (Fed. Cir. 2008).

But “a” or “an” does not *always* mean “one or more.” *Harari v. Lee*, 656 F.3d 1331, 1341 (Fed. Cir. 2011). Indeed, “[w]hen the claim language and specification indicate that ‘a’ means one and only one, it is appropriate to construe it as such even in the context of an open-ended ‘comprising’ claim.” *Id.*; *see also Baldwin Graphic Sys.*, 512 F.3d at 1342-43 (“An exception to the general rule that ‘a’ or ‘an’ means more than one only arises where the language of the claims themselves, the specification, or the prosecution history necessitate a departure from the rule.”).

Here, the claims and written description show a clear intent to limit “an optical output path” to a *single* optical output path. The abstract of the ’150 patent provides that “laser beams in different wavelengths can be shaped into a same optical output path for reading and writing data from optical recording media.” Under the “summary of the invention,” the patent provides that the “primary objective of the . . . invention is to provide an optical pickup head which utilizes two or three laser beams of different wavelengths for reading or writing data on different kinds of optical recording media through a same optical output path.” (’150 Patent at 2:25-29). Also in this summary, the patent provides that “several laser beams of different wavelengths are incident to a beam shaper from different planes individually, then reflected or refracted via some

optical interfaces and composed into an output path, therefore, no complicated components or complicated optical paths are needed.” (*Id.* at 2:44-49).³

Consistent with the “summary of the invention,” the “detailed description of preferred embodiments” provides that the “beam shaper **10** will be installed in the optical path of a multiple laser source pickup head for composing several laser beams of different wavelengths into a single optical output path (*Po*)” (*Id.* at 3:35-38).

Accordingly, the Court finds that patent’s teachings necessitate a departure from the general rule that “an” means “one or more.” *See TiVo*, 516 F.3d at 1303 (“[T]he question whether ‘a’ or ‘an’ is treated as singular or plural depends heavily on the context of its use. The general rule does not apply when the context clearly evidences that the usage is limited to the singular.”) (internal citation omitted); *see also Phillips*, 415 F.3d at 1317, 1323 (explaining that it is “entirely appropriate for a court, when conducting claim construction, to rely heavily on the written description for guidance as to the meaning of the claims” and recognizing that, in certain situations, “it will become clear [that] the patentee . . . intends for the claims and the embodiments in the specification to be strictly coextensive”). Thus, the Court adopts the “a path into which a laser beam travels” portion of LGE’s proposal.

But the Court is not persuaded that the intrinsic evidence mandates including the latter portion of LGE’s proposal—i.e., “exiting the beam shaper” or “coming out of the beam shaper.” “Claim terms are properly construed to include limitations not otherwise inherent in the term only when a patentee sets out a definition and acts as his own lexicographer, or when the

³ In support of its proposal, ITRI points to the following language in the “summary of the invention”: “According to the present invention, a beam shaper located in optical output *paths* of multiple laser beams is used.” (10/10/13 Tr. at 60:18-61:1 (citing ’150 Patent at 2:30-31 (emphasis added))). The Court is not convinced, however, that this supersedes the patent’s consistent emphasis on a single path (as detailed above).

patentee disavows the full scope of a claim term either in the specification or during prosecution.” *Woods*, 692 F.3d at 1283 (internal quotations omitted).

LGE stresses that its “exiting” or “coming out” proposal gives meaning to the word “output” in the disputed language. But the specification doesn’t seem to provide lexicography or disavowal such that the “optical output path” means *only* the path *exiting* the beam shaper. Indeed, LGE’s argument for incorporating the “exiting” or “coming out” limitation seems to be based primarily on disclosed embodiments. (*See, e.g.*, 10/10/13 Tr. at 54:11-20). This, however, is insufficient. *See Thorner*, 669 F.3d at 1365-66 (“It is not enough for a patentee to simply disclose a single embodiment or use a word in the same manner in all embodiments, the patentee must clearly express an intent to redefine the term. . . . Mere criticism of a particular embodiment encompassed in the plain meaning of a claim term is not sufficient to rise to the level of clear disavowal. . . . It is likewise not enough that the only embodiments, or all of the embodiments, contain a particular limitation.”) (internal quotations omitted).⁴

Indeed, Claim 9 seems to permit a portion of the optical output path to be *within* the beam shaper because the *first* beam-composing interface composes the refracted second laser beam with the first laser beam “into an optical output path”—*before* the beams are composed by the *second* beam-composing interface. (*See* ’150 Patent at 9:3-11).

Furthermore, according to Figure 6, a third laser beam is “refracted by the second beam-composing interface” and “then comes out along the same output path (Po) as that of the first laser beam (Beam 1) and the second laser beam (Beam 2).” (*Id.* at 7:3-8). Importantly, in Figure

⁴ Although ITRI initially stated that “the term ‘optical output path’ refers to the specific route travelled by the laser beams *leaving the beam shaper*,” (ITRI Open. Br. at 6-7 (emphasis added)), ITRI unequivocally argued at the *Markman* hearing that the “output” portion of the disputed claim language refers to “post shaping” and “[n]ot exiting.” (10/10/13 Tr. at 56:12-21).

6 itself, it appears as if the third laser beam can “come[] out along the same output path” as that of the first and second laser beams *while still inside* the beam shaper.

To be sure, even if the claim language and specification are ambiguous as to whether the optical output path begins after the beam shaper, any such ambiguity cannot be enough to narrow claim scope. Thus, the Court finds that ITRI’s proposal does not ignore the “output” term, but instead prescribes a different meaning: after being shaped.⁵

Finally, the Court adopts “previously recited” for both “said” and “same,” rejecting the portion of ITRI’s proposal concerning “one or more” for the reasons discussed above.

2. “an objective lens for focusing laser beams”

ITRI’s Proposal ⁶	LGE’s Proposal	Court’s Construction
<i>one or more objective lens for focusing the first, second and third laser beam</i>	<i>an objective lens for focusing the first, second and third laser beams</i>	<i>one or more objective lenses for focusing the first, second and third laser beams</i>

ITRI avers that, since LGE’s accused device has two optical lenses, LGE seeks to limit the claim scope to a single objective lens. (ITRI Open. Br. at 15). ITRI contends that LGE improperly requires that three beams must pass through a single objective lens. (ITRI Resp. Br. at 10; *see also* 10/10/13 Tr. at 67:8-11 (“The claim itself says an objective lens. Doesn’t say anything about focusing the first or second or third laser beams all through 1.”)). ITRI argues that “a” or “an” means “one or more” and “limiting the claimed invention to a singular objective lens as proposed by LG[E]” is improper. (ITRI Open. Br. at 15). Thus, at oral argument, ITRI

⁵ The Court is not persuaded otherwise by LGE’s extrinsic evidence for construction of this claim term. *See Thorner*, 669 F.3d at 1367 (“The patentee is free to choose a broad term and expect to obtain the full scope of its plain and ordinary meaning unless the patentee explicitly redefines the term or disavows its full scope.”).

⁶ ITRI’s proposed construction was modified at the *Markman* hearing and is reproduced herein pursuant to the parties’ post-hearing joint submission. (D.E. No. 244-1 at 1).

explained that the term means: “one or more objective lens[es] for focusing the first, second and third laser beam[s].” (10/10/13 Tr. at 70:6-9).

LGE argues, however, that the general rule that “an” means “one or more” does not apply here because the context clearly shows that the usage is limited to the singular. (LGE Open. Br. at 13). LGE argues that, given the claim language, “the recited objective lens must be able to focus multiple laser beams in a single path and onto the disc as a single spot.” (D.E. No. 183, LGE’s Responsive *Markman* Brief (“LGE Resp. Br.”) at 17 (emphasis in original)). LGE explains that its proposal does *not* exclude a device from having multiple objective lenses—but requires that “there be *at least one* objective lens that focuses *all three* of the recited laser beams.” (LGE Open. Br. at 13 (emphasis in original)). LGE argues that its proposal is consistent with the disclosed embodiments. (*Id.* at 14). LGE also argues that using multiple objective lenses was well-known in the prior art. (LGE Resp. Br. at 17-18).

The Court finds that the general rule that “an” means one or more applies here. *See Baldwin Graphic Sys.*, 512 F.3d at 1342. ITRI’s proposal comports with the following claim limitation: “an objective lens for focusing laser beams in said optical output path onto said optical recording media as an reading/writing spot.” (’150 Patent at 9:12-14). LGE interprets this language as requiring that at least one objective lens focus all three laser beams. But the claim requires that at least one objective lens focuses multiple laser beams, not necessarily three laser beams. Indeed, the claim does *not* say “an objective lens for focusing *the three* laser beams.” LGE itself concedes this: “the recited objective lens must be able to focus *multiple* laser beams in a single path and onto the disc as a single spot.” (LGE Resp. Br. at 17 (emphasis added) (underlining from original omitted)). And, although LGE points to the disclosed

embodiments and figures, this does not reflect a clear intent to narrow the disputed claim language. *See Thorner*, 669 F.3d at 1365-66; *Baldwin Graphic Sys.*, 512 F.3d at 1342-43.

To be sure, the written description explains that using two objective lenses “greatly increase[s] the weight of the pickup head and the price of the product.” (’150 Patent at 1:42-46). But the written description does so in the context of criticizing various designs, not just those involving two objective lenses. (*Id.* at 1:26-2:22). For instance, use of liquid crystal display (LCD) shutter is also criticized. (*Id.* at 1:54-60). After all, “[a]n invention may possess a number of advantages or purposes, and there is no requirement that every claim directed to that invention be limited to encompass all of them.” *E-Pass Techs., Inc. v. 3Com Corp.*, 343 F.3d 1364, 1370 (Fed. Cir. 2003). In sum, the patent does not mandate that there be at least one objective lens that focuses all three laser beams. Accordingly, the Court adopts ITRI’s proposal, making only minor grammatical modifications.⁷

3. The three “laser beam generator” terms

Terms	ITRI’s Proposals	LGE’s Proposals	Court’s Constructions
“first laser beam generator,” “second laser beam generator,” and “third laser beam generator”	<i>plain & ordinary meaning to a person skilled in the art</i>	<i>these terms refer to “three separate laser beam sources that each create a laser beam”</i>	<i>plain & ordinary meaning to a person skilled in the art</i>
“a first laser beam generator and a second laser beam generator, for generating a first laser beam and a	<i>plain & ordinary meaning to a person skilled in the art</i>	<i>a first laser beam source for creating a first laser beam and a second laser beam source separate</i>	<i>plain & ordinary meaning to a person skilled in the art</i>

⁷ ITRI proposal is as follows: “one or more objective lens for focusing the first, second and third laser beam.” (D.E. No. 244-1 at 1). But the Court slightly modifies this proposal as follows: “one or more objective lenses for focusing the first, second and third laser beams.” These grammatical modifications do not, however, alter the claim scope of the disputed language as construed by the Court.

second laser beam of different wavelengths, respectively”		<i>from the first laser beam source for creating a second laser beam, where the first and second laser beams have different wavelengths</i>	
“multiple laser sources of different wavelengths”	<i>plain & ordinary meaning to a person skilled in the art</i>	<i>two or more laser sources, each laser source generating a laser beam having a wavelength different from that generated by the other laser source(s)</i>	<i>plain & ordinary meaning to a person skilled in the art</i>

ITRI argues that the ’150 patent does not require separate generators, just multiple generators. (ITRI Open. Br. at 14). ITRI asserts that nothing in the intrinsic evidence shows the inventor’s clear intent to limit the invention as LGE proposes. (*Id.*). At oral argument, ITRI further explained that the three laser beam generators are laser diodes and that diodes can share circuitry and other elements. (10/11/13 Tr. at 5:8-11).⁸ In short, ITRI argues that the patent requires different generators, not necessarily physically separate generators. (10/11/13 Tr. at 5:1-3; *see also* 7:7-12 (“Each wavelength will have its own generator. So it is almost axiomatic that if you have three laser beams, you will have three generators. They don’t have to be physically separated because the fact that there is three laser beams means there must be three generators.”)).

⁸ Although ITRI argues that the generators are diodes that share circuitry, ITRI provides no intrinsic or extrinsic evidence supporting this statement. (10/10/13 Tr. at 86:3-18).

LGE argues that an ordinary artisan would understand “first,” “second,” and “third” generators to mean three separate generators. (LGE Open. Br. at 15-16 (citing ’150 Patent at 1:6-35 & D.E. No. 173 (“Milster Decl.”) ¶ 69); LGE Resp. Br. at 14-15). LGE further argues that “the key to this beam shaper . . . is to have [the beams] come from different directions” and that this is “fundamental” to the patent. (10/10/13 Tr. at 83:8-12; *see also* 10/11/13 Tr. at 11:23-12:1 (“So clearly the whole invention is about how you take three lasers coming from three different directions and use two prisms to get them into one location, into one path.”)). LGE also explains that, during prosecution, the inventor added the “third laser beam” limitation to overcome prior art showing two laser beam generators. (LGE Resp. Br. at 15).

The Court adopts the plain and ordinary meaning of each of these terms and declines to adopt LGE’s proposals. “Claim terms are properly construed to include limitations not otherwise inherent in the term only when a patentee sets out a definition and acts as his own lexicographer, or when the patentee disavows the full scope of a claim term either in the specification or during prosecution.” *Woods*, 692 F.3d at 1283 (internal quotations omitted). To redefine a term, “[i]t is not enough for a patentee to simply disclose a single embodiment or use a word in the same manner in all embodiments.” *Thorner*, 669 F.3d at 1365. Similarly, for disavowal, “[i]t is . . . not enough that the only embodiments, or all of the embodiments, contain a particular limitation.” *Id.* at 1366.

As evident from the parties’ briefing and oral argument, the issue here is whether the three *different* laser beam generators are necessarily *separate*. (*See, e.g.*, LGE Open. Br. at 15; ITRI Resp. Br. at 16).⁹ As such, LGE does not explain what “separate” means. Indeed, separate could be interpreted to mean completely independent or disconnected.

⁹ To that extent, the Court does not find the scope of “multiple laser sources of different wavelengths” disputed. Indeed, ITRI states that “LG[E] argues [C]laim 9 requires the three laser beam generators have three different

But the claim language “first,” “second,” and “third” does not necessarily implicate any such physical disconnection or independence. *See Home Diagnostics, Inc. v. LifeScan, Inc.*, 381 F.3d 1352, 1358 (Fed. Cir. 2004) (“Absent a clear disavowal or contrary definition in the specification or the prosecution history, the patentee is entitled to the full scope of its claim language.”); *see also Electro Sci. Indus., Inc. v. Dynamic Details, Inc.*, 307 F.3d 1343, 1348 (Fed. Cir. 2002) (“The preamble defines ‘circuit boards’ as ‘at least first and second substantially identical circuit boards each having at least a first conductor layer, a dielectric layer, and a second conductor layer.’ . . . This preamble definition narrows the meaning of ‘circuit boards’ to at least two substantially identical boards. Nonetheless it does not state or suggest that those circuit boards must be separated.”). And, although the figures seemingly depict physically separate generators that are disconnected, that is not enough to limit claim language. *See Thorner*, 669 F.3d at 1365-66.

To be sure, LGE contends that the “the whole invention is about how you take three lasers coming from three different directions and use two prisms to get them into one . . . path” and, that without LGE’s proposed separation, both the incident plane and the first beam-composing interface “would be removed from the claim” and “you would have rewritten the claim.” (10/11/13 Tr. at 11:23-12:12).

LGE’s proposal, however, risks improperly excluding from claim scope those designs where generators may be connected in some way, even if positioned in different locations. The Court accordingly refuses to adopt LGE’s proposals because the patentee is entitled to the full

wavelengths of light. ITRI agrees with this statement, but objects to the additional unsupported limitation injected into the claim by the word ‘separate.’” (ITRI Resp. Br. at 16). Thus, the Court adopts the plain and ordinary meaning of this term. *See Warner Chilcott Co., LLC v. Mylan Inc.*, Nos. 11-6844 & 11-7228, 2013 WL 3336872, at *3 (D.N.J. July 2, 2013) (“[D]espite a careful reading of the parties’ submissions as well as questioning counsel at oral argument, it is still unclear to the Court exactly what the actual dispute is between the parties regarding th[e] claim term. . . . As such, the Court declines to adopt any of the parties’ proposed constructions at this time, and the term’s plain and ordinary meaning shall govern.”).

scope of the claim language absent lexicography or disavowal indicating that the generators must, in fact, be separate. *See Thorner*, 669 F.3d at 1365-66; *see also Kara Tech. Inc. v. Stamps.com Inc.*, 582 F.3d 1341, 1348 (Fed. Cir. 2009) (“The claims, not specification embodiments, define the scope of patent protection. The patentee is entitled to the full scope of his claims, and we will not limit him to his preferred embodiment or import a limitation from the specification into the claims.”).

4. The three “beam-composing” terms

Terms	ITRI’s Proposals	LGE’s Proposals¹⁰	Court’s Constructions
“beam-composing interface”	<i>a plane of the beam shaper that directs laser beams</i>	<i>a plane of the beam shaper that directs laser beams into a common optical path</i>	<i>a plane of the beam shaper that directs laser beams into a common optical path</i>
“for composing said refracted second laser beam with said first laser beam into an optical output path”	<i>plain and ordinary meaning</i>	<i>[no construction needed]</i>	<i>plain and ordinary meaning</i>
“composing said first and second laser beams, . . . , with a third laser beam into said optical output path”	<i>plain and ordinary meaning</i>	<i>[no construction needed]</i>	<i>plain and ordinary meaning</i>

ITRI opposes incorporating the “into a common optical path” limitation based on its previous arguments relating to the “optical output path” term. (ITRI Open. Br. at 11 n.33 (“Note

¹⁰ LGE’s proposed constructions were modified at the *Markman* hearing and are reproduced herein pursuant to the parties’ post-hearing joint submission. (D.E. No. 244-2 at 3-4).

also that LG[E] attempts again here to incorporate its added limitations ‘common’ and ‘previously recited’ optical output paths to avoid an infringement read. For the reasons discussed above regarding construction of ‘optical output path,’ ITRI disagrees with reading in this added limitation to the claims.”)). Additionally, ITRI explains that “[C]laim 9 provides more than adequate guidance regarding the resulting course of the laser beams.” (ITRI Resp. Br. at 11). Indeed, at oral argument, ITRI argued that “composing” just means “directing.” (10/10/13 Tr. at 110:16-111:14).

LGE argues that ITRI’s proposal ignores the claim language and the objective of the ’150 patent, which is to consolidate multiple laser beams into a single output path. (LGE Open. Br. at 17). LGE asserts that the patent specifies that the beam-composing interfaces compose different beams into the same output path. (*Id.* (citing ’150 Patent at 4:13-21)). Indeed, LGE insists that “composing” means bringing together beams into the same optical path. (10/10/13 Tr. at 95:12-96:5). As for the disputed term “optical output path,” LGE cites the claim language and various portions of the specification purportedly showing that a beam-composing interface is a plane of the beam shaper that directs laser beams into a common output path. (*Id.* at 112:21-113:14, 114:7-116:25).

The Court adopts LGE’s proposal for “beam-composing interface” and the parties agree that no construction is necessary for the other two terms. The “summary of the invention” explains that the “*beam shaper* is composed of two prisms in which several laser beam *interfaces* are formed.” (’150 Patent at 2:30-33 (emphasis added)). It further provides that “[e]ach laser beam interface is furnished with a specific coating for reflecting laser beam[s] of a specific wavelength and transmitting and refracting laser beams of other wavelengths.” (*Id.* at 2:33-36). It explains that “several laser beams of different wavelengths are incident to a beam shaper from

different planes individually, then reflected or refracted via some optical *interfaces* and *composed into an output path*, therefore, no complicated components or complicated optical paths are needed.” (*Id.* at 2:44-49 (emphasis added)).

Consistent with these teachings, the description of the preferred embodiments explains that the beam-composing interfaces direct laser beams into a common optical path. (*Id.* at 4:5-21 (“The first laser beam (Beam 1), the second laser beam (Beam 2) and the third laser beam (Beam 3) are . . . composed by the first beam-composing interface **102** and the second beam-composing interface **103** into the optical output path P_o To accomplish the composition of different laser beams to the same output path P_o . . . the angles and the materials of the first prism **20** and the second prism **30** have to be carefully designed, so that the laser beams of different wavelengths coming to the incident plane **101**, reflected or refracted by the first beam-composing interface **102** and the second beam-composing interface **103** can all be lead [sic] into the same optical output path P_o .”)).

Given these teachings and disclosures, ITRI’s proposal for “beam-composing interface” seems divorced from the specification. *See SkinMedica, Inc. v. Histogen Inc.*, 727 F.3d 1187, 1196 (Fed. Cir. 2013) (“Disclaiming the ordinary meaning of a claim term—and thus, in effect, redefining it—can be affected through repeated and definitive remarks in the written description.”) (internal quotations omitted); *Praxair, Inc. v. ATMI, Inc.*, 543 F.3d 1306, 1324 (Fed. Cir. 2008) (“The claims of the patent must be read in light of the specification’s consistent emphasis on [the] fundamental feature of the invention.”); *Alloc, Inc. v. Int’l Trade Comm’n*, 342 F.3d 1361, 1370 (Fed. Cir. 2003) (“[W]here the specification makes clear at various points that the claimed invention is narrower than the claim language might imply, it is entirely permissible

and proper to limit the claims.”). Thus, the Court adopts LGE’s proposal for “beam-composing interface.”

5. “incident laser plane”¹¹

ITRI’s Proposal	LGE’s Proposal	Court’s Construction
<i>a plane that directs a laser beam that strikes it</i>	<i>a plane [of the beam shaper] that a laser beam strikes</i>	<i>a plane [of the beam shaper] that a laser beam strikes</i>

ITRI contends that its proposal for “incident laser plane” says what the plane does, whereas LGE’s does not. (10/10/13 Tr. at 126:11-16). ITRI argues that it is “much more useful to the jury” to explain “what is happening”—which is that the plane directs the beam. (*Id.* at 126:17-21).

LGE argues that the “incident laser plane” in Claim 9 is a plane of the beam shaper that refracts the second laser beam that strikes it. (LGE Open. Br. at 18). LGE explains that its proposal defines what the “incident laser plane” is because the “claim itself says what it does.” (10/10/13 Tr. at 127:10-15).

The Court adopts LGE’s proposal. Claim 9 recites, in relevant part, “an incident laser plane for refracting said second laser beam, to generate a refracted second laser beam.” ITRI’s proposal effectively substitutes “refracting” with directing (i.e., “a plane that *directs* a laser beam that strikes it”). But ITRI provides the Court with no evidence to rewrite the claim and replace refracting with directing. Indeed, the claim language itself supports LGE’s proposal and ITRI’s only challenge to LGE’s proposal is that LGE’s proposal is less useful to the jury. (*See* 10/10/13 Tr. at 126:17-21 (“What we think is much more useful to the jury is that what is happening is a plane that directs the beam. That is helpful. If you just say it strikes it, the jury goes, what

¹¹ The parties initially disputed the scope of “an incident laser beam,” but later agreed that this term means “a laser beam that strikes a plane of the beam shaper.” (D.E. No. 244-1 at 1; D.E. No. 244-2 at 4).

happens to it? Well, what happens to it, it is directed.”)). Thus, the Court adopts LGE’s proposal for this term because the intrinsic evidence does not compel substituting directing for “refracting.”

6. The two “refraction” terms¹²

Terms	ITRI’s Proposals	LGE’s Proposals	Court’s Constructions
“refracting”	<i>changing the direction of a laser beam at the boundary or interface of a medium</i>	<i>changing the direction of [a laser beam] when it passes from one medium to another medium</i>	<i>changing the direction of a laser beam at the boundary or interface of a medium as the beam passes from one medium to another medium</i>
“refracted”	<i>plain & ordinary meaning to a person skilled in the art</i>	<i>having the direction changed when passing from one medium to another medium</i>	<i>the direction of a laser beam having changed at the boundary or interface of a medium as the beam passed from one medium to another medium</i>

ITRI “agree[s] that refraction includes changing direction or changing path.” (10/10/13 Tr. at 131:25-132:1). ITRI disputes, however, that refraction only occurs when a beam passes from one medium to another medium. (*Id.* at 132:4-6). Instead, ITRI contends that refraction occurs at the “interface” or “boundary” between media. (*Id.* at 132:6-21; 144:24-145:6). ITRI insists that refracting starts “immediately” and “[y]ou don’t have to wait until you are completely

¹² The parties’ proposed constructions were modified at the *Markman* hearing and are reproduced herein pursuant to their post-hearing joint submission. (D.E. No. 244-1 at 1; D.E. No. 244-2 at 5).

through the medium.” (*Id.* at 139:24-25).¹³ ITRI asserts that LGE’s proposal “ignores the fact that the moment the light hits the surface, it is being refracted.” (*Id.* at 138:24-139:1). ITRI thus characterizes the issue as “whether or not it is going to pass from one medium to another medium and whether or not that requires some degree of thickness that is not demanded by the disclosure or by the claim language itself.” (*Id.* at 134:4-7).

LGE avers that ITRI’s infringement allegations suggest that ITRI interprets “refracted” and “refracting” broadly to encompass “reflected” and “reflecting.” (LGE Open. Br. at 10). LGE asserts that, by definition, refraction requires light to pass from a first medium into a second medium. (*Id.* at 8-9). LGE explains that “a laser beam coming from air must be transmitted into the beam shaper for the beam to be a refracted laser beam in the [’]150 patent.” (*Id.* at 12 (emphasis in original)). LGE contends that, “if the laser beam were not transmitted and instead returned to the air after hitting the beam shaper’s surface, then it would be a reflected—not refracted—laser beam.” (*Id.* at 12-13). LGE relies on its expert’s declaration as well as a technical dictionary. (*Id.* at 8-9 (citing Milster Decl.; Ex. 3 to D.E. No. 172 (“Cangro Decl.”))).

“Claim terms are given their ordinary and customary meaning—the meaning that they would have to a person of ordinary skill in the art in light of the specification and prosecution history at the time of the invention.” *Woods*, 692 F.3d at 1283. To ascertain the meaning of a term that has a “particular meaning in a field of art,” the Court must examine the intrinsic evidence and any relevant extrinsic evidence. *See Phillips*, 415 F.3d at 1314, 1318. Here, “refracting” and “refracted” seem to have “particular meaning in a field of art” and construing this claim language does *not* seem to reflect a situation where the “ordinary meaning of claim language as understood by a person of skill in the art [is] readily apparent.” *See id.* at 1314.

¹³ To advance its position, ITRI cites LGE’s own extrinsic evidence—a technical dictionary and treatise. (10/10/13 Tr. at 144:17-145:6 (citing Exs. 3 & 15 to Cangro Decl.)).

Given the parties' dispute, the intrinsic evidence provides minimal guidance. The '150 patent does, however, distinguish between refraction and reflection. For instance, Claim 6 provides, in relevant part, as follows: "said first beam-composing interface enables said first laser beam to be *refracted* to form into a *refracted* first laser beam, *but reflecting* said second laser beam to form into a *reflected* second laser beam." ('150 Patent at 8:38-41 (emphasis added)). Similarly, the abstract provides that "[e]ach laser beam interface is furnished with a specific coating for *reflecting* laser beam of a *specific* wavelength and transmitting and *refracting* laser beams of *other* wavelengths." (*Id.* at Abstract (emphasis added)).

The Court may also consider extrinsic evidence. *Phillips*, 415 F.3d at 1318. Namely,

[J]udges are free to consult dictionaries and technical treatises "at any time in order to better understand the underlying technology and may also rely on dictionary definitions when construing claim terms, so long as the dictionary definition does not contradict any definition found in or ascertained by a reading of the patent documents."

Id. at 1322-23 (quoting *Vitronics*, 90 F.3d at 1584 n.6).

Here, the parties both rely on the following dictionary definition from the *McGraw-Hill Dictionary of Scientific and Technical Terms (Fifth Edition)*:

Refraction [ELECTROMAG] The change in direction of lines of force of an electric or magnetic field at a boundary between media with different permittivities or permeabilities. [PHYS] The change of direction of propagation of any wave, such as an electromagnetic or sound wave, when it passes from one medium to another in which the wave velocity is different, or when there is a spatial variation in a medium's wave velocity.

(Ex. 3 to Cangro Decl. at 8).

To advance their respective positions, ITRI relies on the first portion of the definition (i.e., the "ELECTROMAG" portion), whereas LGE relies on the second portion (i.e., the "PHYS" portion). Indeed, LGE argues that the second portion "talks about wave" and that its

expert properly relied on this portion. (10/11/13 Tr. at 13:15-14:11). ITRI, however, disputes that only the second portion applies, arguing that a technical treatise submitted by LGE, the *Handbook of Optics*, confirms this by explaining that “[a]t smooth interfaces between media with different indices rays [refract] and reflect.” (10/11/13 Tr. at 15:8-16:6).¹⁴

As such, the Court must incorporate “boundary or interface.” First, the *McGraw-Hill Dictionary of Scientific and Technical Terms* incorporates “boundary” in the definition of “refraction.” At the *Markman* hearing, LGE even responded to the Court’s questioning by reading the *entire* definition, beginning with the first portion that incorporates the “boundary” term. (10/10/13 Tr. at 143:11-22). Second, although LGE’s expert only relies on the second portion of the definition, the expert never says that the first portion is inapplicable. (See Milster Decl. ¶¶ 50-51). In fact, LGE’s expert explains that “‘refracting’ in Claim 9 refers to the fact that the second laser beam undergoes refraction *at the interface* formed at the incident laser plane.” (*Id.* ¶ 51 (emphasis added)). Third, as ITRI correctly observes, the *Handbook of Optics* confirms that refracting involves the interfaces between media. (Ex. 15 to Cangro Decl. at 1.10 (“At smooth interfaces between media with different indices rays refract and reflect.”)). Thus, the Court must incorporate “boundary or interface” into the construction for the disputed claim language.

Similarly, however, the Court must incorporate the concept of passing through from one medium to another. Given the entire *McGraw-Hill Dictionary* definition, ITRI’s proposal seems impermissibly broad. Indeed, ITRI provides no intrinsic or extrinsic evidence refuting that, after changing direction at an interface or boundary, a refracted beam passes from one medium to another medium.

¹⁴ Given the disclosure in the *Handbook of Optics*, the Court substitutes “refract” for “reflect” in the quoted transcript text above notwithstanding that the actual 10/11/13 transcript provides “reflect and reflect,” (see 10/11/13 Tr. at 15:9-10).

To contest the passing-through portion, ITRI seems to rely only on the real-world analogy that, when looking at a window or a pond, it's possible to see through but also see a reflection—and, therefore, reflection and refraction can both happen at the same time. (*See* 9/20/13 Tr. at 16:18-24; 10/10/13 Tr. at 133:3-9, 140:3-9). But, even in these real-world situations, there is some element that passes through. In fact, ITRI concedes as much: “The other thing is there is an element where reflection and refraction can both happen to a beam at the same time You can have it strike the surface and reflect and *you can have other parts of this go through.*” (10/10/13 Tr. at 140:3-9 (emphasis added)).

To be sure, ITRI presents no intrinsic or extrinsic evidence showing that the laser beams of the '150 patent would be able to both refract and reflect at the same time, like looking at a window or pond. Instead, as discussed above, the '150 patent seems to distinguish between refracting and reflecting, indicating that one or the other happens to a given beam. Accordingly, the Court declines to construe the disputed claim language based on ITRI's attorney argument using real-world analogies in the face of such intrinsic evidence. Thus, the Court must incorporate the concept of passing through from one medium to another in the disputed claim language.

B. Disputed Claim Terms in the '384 Patent

1. “a second magnetic element unit” (Claim 12)¹⁵

ITRI's Proposal	LGE's Proposal	Court's Construction
<i>plain & ordinary meaning to a person skilled in the art</i>	<i>a second group of magnets separate from the “first magnetic element unit”</i>	<i>plain & ordinary meaning to a person skilled in the art</i>

ITRI argues that the claims “sufficiently define the scope of the invention” and adopting LGE’s proposal will “only confuse the jury.” (ITRI Open. Br. at 33). ITRI also argues that LGE’s “separate” limitation is unsupported. (ITRI Resp. Br. at 31).

LGE proposes its “separate” construction for three reasons: (1) the claim language requires that the first and second magnetic element units have perpendicular “magnetic flux directions”; (2) the terms “first” and “second” suggest that the units must be separate; and (3) its expert opined that, given the claim language and the specification’s teachings, an ordinary

¹⁵ The parties initially disputed the scope of the term “a first magnetic element unit” in Claim 12. But, at the *Markman* hearing, the parties agreed that the larger phrase (which has this term) should be construed as follows, with the bolded language reflecting the agreed upon addition to the claim language (and other minor modifications supplemented herein by the Court to reflect changes made pursuant to the Certificate of Correction):

Claim language	Agreed-upon construction
wherein the magnetic element set includes a first magnetic element unit and a second magnetic element unit, the first magnetic element unit having a magnetic flux <u>direction</u> parallel with a normal <u>direction of the an area</u> which the tracking coils surround, the second magnetic element unit corresponding to the focusing coils and having a magnetic flux <u>direction</u> perpendicular to the first magnetic element unit	wherein the magnetic element set includes a first magnetic element unit corresponding to the tracking coils and a second magnetic element unit, the first magnetic element unit having a magnetic flux <u>direction</u> parallel with a normal <u>direction of the an area</u> which the tracking coils surround, the second magnetic element unit corresponding to the focusing coils and having a magnetic flux <u>direction</u> perpendicular to the first magnetic element unit

(See D.E. No. 244-1 at 2; D.E. No. 244-2 at 6 n.10). The Court need not further provide any construction in relation to “a first magnetic element unit” because the agreed-upon construction resolves any dispute in claim scope. See *Vivid Technologies, Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999) (“[O]nly those terms need be construed that are in controversy, and only to the extent necessary to resolve the controversy.”).

artisan would understand that the magnetic element units are separate. (LGE Open. Br. at 35; D.E. No. 174 (“Horenstein Decl.”) ¶¶ 88-92).

The Court adopts the plain and ordinary meaning of “a second magnetic element unit.” To incorporate the “separate” limitation, there must be lexicography or disavowal. *See Woods*, 692 F.3d at 1283. First, the Court is not persuaded that the ordinal terms “first” and “second” necessarily mean the magnets are separate. *See, e.g., Electro Sci. Indus.*, 307 F.3d at 1348. Second, LGE’s expert opines that the first and second magnetic element units must be separate—but relies only on embodiments and related descriptions of embodiments. (Horenstein Decl. ¶ 92 (citing ’384 patent at Figs. 1-3; 3:18-25; 4:27-30)). This is not enough to incorporate the proposed limitation. *See Thorner*, 669 F.3d at 1365-66.

Finally, the Court is unconvinced that the use of the “perpendicular” claim language mandates the separate limitation. As LGE itself explains, it “use[s] the word separate here really only to distinguish the second group of magnets from the first group of magnets” and that “[w]e are talking about different magnets located in a different location.” (10/11/13 Tr. at 38:10-14, 39:6-8). But the claim language itself (e.g., “perpendicular”) seems to do exactly this, rendering LGE’s proposed limitation unnecessary. *See Thorner*, 669 F.3d at 1367 (“The patentee is free to choose a broad term and expect to obtain the full scope of its plain and ordinary meaning unless the patentee explicitly redefines the term or disavows its full scope.”). The Court therefore adopts the plain and ordinary meaning of “a second magnetic element unit.”

2. “opposing,” or the larger phrase, “two opposing first magnetic elements, the second portion having two opposing second magnetic elements” (Claim 12)

ITRI’s Proposal	LGE’s Proposal	Court’s Construction
<i>plain & ordinary meaning to a person skilled in the art</i>	<i>two first magnetic elements on opposite sides of the ferromagnetic yoke, the second portion having two second magnetic elements on opposite sides of the ferromagnetic yoke</i>	<i>plain & ordinary meaning to a person skilled in the art</i>

Initially, LGE proposed construing “opposing” to mean “on opposite sides of the ferromagnetic yoke.” (LGE Open. Br. at 33-34). In response, ITRI argued that inserting LGE’s proposal in the actual claim language would render the claim “unintelligible.” (ITRI Open. Br. 35). ITRI also argued that “opposing” has a common meaning understood by lay persons as well as ordinary artisans, and, furthermore, that the claim language provides the relevant positional context. (ITRI Resp. Br. at 31).

LGE subsequently revised its proposal, requesting construction of the larger phrase (reproduced above): “two [] first magnetic elements *on opposite sides of the ferromagnetic yoke*, the second portion having two [] second magnetic elements *on opposite sides of the ferromagnetic yoke*.” (LGE Resp. Br. at 38-39 (emphasis in original)). In support of its proposal, LGE maintains that the claim language “closely follows the specification.” (10/11/13 Tr. at 50:16-17). Indeed, LGE argues that, “[i]n every disclosed embodiment, the ‘first magnetic element unit’ includes magnetic elements that are physically on the opposite sides of the ferromagnetic yoke.” (LGE Open. Br. at 34).

The Court declines to adopt LGE’s proposal. To redefine a term, “[i]t is not enough for a patentee to simply disclose a single embodiment or use a word in the same manner in all

embodiments.” *Thorner*, 669 F.3d at 1365. Similarly, for disavowal, “[i]t is . . . not enough that the only embodiments, or all of the embodiments, contain a particular limitation.” *Id.* at 1366. Here, although adopting LGE’s proposal seems consistent with the description of the preferred embodiments, that alone is insufficient. *See id.* at 1365-66. Moreover, the meaning of “opposing” seemingly “involves little more than the application of the widely accepted meaning of commonly understood words.” *See Phillips*, 415 F.3d at 1314. Accordingly, whether looking at “opposing” in isolation or as part of the larger phrase, the Court rejects LGE’s proposal and adopts the plain and ordinary meaning.

3. “to generate a magnetic field perpendicular to[.]” (Claims 12 & 18)

ITRI’s Proposal	LGE’s Proposal	Court’s Construction
<i>plain & ordinary meaning to a person skilled in the art</i>	<i>to generate a magnetic field within the interior space of the ferromagnetic yoke with a direction perpendicular to [...]</i>	<i>plain & ordinary meaning to a person skilled in the art</i>

ITRI argues that LGE’s proposal unnecessarily duplicates certain portions of the claim language and adds unsupported limitations. (ITRI Open. Br. at 32). ITRI asserts that the “motivation for LG[E]’s construction is to insert the unsupported claim limitation of ‘within the interior space.’” (ITRI Resp. Br. at 33).

LGE argues that, “[w]ithout a reference location, the claim is rendered insolubly ambiguous to the ordinary artisan.” (LGE Open. Br. at 36). LGE asserts that its proposal “properly recognizes that the relevant location for the claimed magnetic field direction is at least within the interior space of the ferromagnetic yoke.” (*Id.* at 37). Thus, LGE contends that, without a reference to a location, the disputed term is indefinite. (LGE Resp. Br. at 36).

The court declines to adopt LGE's proposal. LGE's proposal seems premised on an indefiniteness challenge: without incorporating "interior space of the ferromagnetic yoke," the term is insolubly ambiguous or indefinite. "The definiteness of a patent claim depends on whether one skilled in the art would understand the bounds of the claim when read in light of the specification." *Howmedica Osteonics Corp. v. Tranquil Prospects, Ltd.*, 401 F.3d 1367, 1371 (Fed. Cir. 2005).

Here, LGE itself explains that an ordinary artisan "would have recognized that the relevant location(s) is within the interior of the ferromagnetic yoke because the purpose of the yoke is well understood to provide a 'magnetic circuit' to confine the magnetic field lines except at those points where the field lines are intended to traverse an air gap." (LGE Open. Br. at 37 (citing Horenstein Decl. ¶ 95)).

The Court finds an inconsistency in LGE's position. LGE argues that, *without* a reference to the interior space of the ferromagnetic yoke, "one of ordinary skill in the art would have understood that a magnetic field of a magnet essentially has an infinite number of directions depending on where around the magnet the field is measured." (LGE Resp. Br. at 36). But LGE and its expert understand "the relevant location for the claimed magnetic field direction to be at least within the interior space of the ferromagnetic yoke" in view of the specification and knowledge of the art. (*Id.*; *see also* LGE Open. Br. at 37).

The Court therefore declines to adopt LGE's proposal on the basis that the claim language is indefinite because the bounds of the claim language seem quite apparent to LGE and its expert. *See Wellman, Inc. v. Eastman Chem. Co.*, 642 F.3d 1355, 1367 (Fed. Cir. 2011) (reversing indefiniteness ruling and finding that expert testimony "suppl[ied] a link between the specification and the understanding in th[e] field"); *Soitec, S.A. v. Silicon Genesis Corp.*, 81 F.

App’x 734, 738 (Fed. Cir. 2003) (affirming definiteness finding where accused infringer’s “own experts were able to understand the bounds of the claims”). Accordingly, the Court agrees with ITRI that no construction of this term is necessary and adopts the plain and ordinary meaning to a person skilled in the art. *See Deere & Co. v. Bush Hog, LLC*, 703 F.3d 1349, 1359 (Fed. Cir. 2012) (affirming claim construction that adopted the plain meaning of a disputed term and finding that, because the term “reasonably describes the claimed subject matter to one skilled in the art, it does not render [the claim] indefinite”).¹⁶

4. The parallel/perpendicular “magnetic flux direction” terms (Claim 12)

Terms	ITRI’s Proposals	LGE’s Proposals	Court’s Constructions
“having a magnetic flux direction parallel with a normal direction of an area which the tracking coils surround”	<i>plain & ordinary meaning to a person skilled in the art</i>	<i>[Each magnetic element in “the first magnetic element unit”] having the direction of magnetic flux, at the corresponding tracking coil, parallel with a normal direction of an area that a winding of the tracking coils enclose</i>	<i>plain & ordinary meaning to a person skilled in the art</i>
“having a magnetic flux direction perpendicular to the first magnetic element unit”	<i>plain & ordinary meaning to a person skilled in the art</i>	<i>[Each magnetic element in “the second magnetic element unit”] having the direction of magnetic flux, at the corresponding focusing coil, perpendicular to</i>	<i>plain & ordinary meaning to a person skilled in the art</i>

¹⁶ The Court renders its claim construction ruling without prejudice to LGE’s ability to formally challenge validity on indefiniteness grounds at a later stage.

		<i>the direction of magnetic flux of “the first magnetic element unit”</i>	
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ITRI argues that LGE’s proposals add limitations without support—i.e., “at the corresponding tracking coil” and “at the corresponding focusing coil.” (ITRI Open. Br. at 34). Indeed, ITRI asserts that LGE wants the magnetic flux direction “to occur at a very specific location,” but that no intrinsic evidence supports LGE’s proposed limitations. (ITRI Resp. Br. at 33; *see also* 10/11/13 Tr. at 73:2-7 (“So what they are trying to do is they are trying to limit the claim to a finite area where these forces are applied. That is nowhere in the claim. It is nowhere in the specification. It is nowhere in any particular embodiment.”)).

LGE argues that an ordinary artisan would have recognized that the relevant “magnetic flux direction” of the first magnetic element unit or second magnetic element unit is measured at the corresponding tracking or focusing coils, respectively. (LGE Open. Br. at 40). LGE contends that its proposals are supported by the claim language, the specification’s disclosures, and its expert’s declaration. (LGE Resp. Br. at 38). Notably, it asserts that a “‘magnetic flux direction’ without reference location would have been indefinite to one of ordinary skill in the art.” (*Id.*).¹⁷

But, as with the term “to generate a magnetic field perpendicular to[...],” LGE and its expert understand the bounds of this claim. (*See, e.g.*, LGE Open. Br. at 40 (citing Horenstein Decl. ¶ 104)). The Court therefore again declines to adopt LGE’s proposal on the basis that the claim language is indefinite without adopting its proposals. Accordingly, the Court agrees with

¹⁷ The Court notes that, as to the first of these two terms, the parties agree that “normal” means perpendicular to the plane surrounded by the tracking coils. (10/11/13 Tr. at 60:9-25, 61:21-62:2, 66:18-67:2).

ITRI that no construction of this term is necessary and adopts the plain and ordinary meaning to a person skilled in the art. *See Deere & Co.*, 703 F.3d at 1359 (affirming claim construction that adopted the plain meaning of a disputed term and finding that, because the term “reasonably describes the claimed subject matter to one skilled in the art, it does not render [the claim] indefinite”).¹⁸

5. The three coincided “magnetic flux direction” terms (Claim 12)¹⁹

Terms	ITRI’s Proposals	LGE’s Proposals	Court’s Construction
“the magnetic flux direction of the first magnetic elements from the N pole to the S pole being coincided with the direction from the ferromagnetic yoke to the objective lens holder”	<i>the direction of the magnetic flux from the N pole to the S pole of the first magnetic elements being coincided with the direction inward from the ferromagnetic yoke to the objective lens holder</i>	<i>the direction of the magnetic flux from the N pole to the S pole of each of the first magnetic elements at the corresponding tracking coil being coincided with the direction from where the first magnetic element is on the ferromagnetic yoke to the objective lens holder</i>	<i>the direction of the magnetic flux from the N pole to the S pole of the first magnetic elements being coincided with the direction inward from the ferromagnetic yoke to the objective lens holder</i>
“the magnetic flux direction of the second magnetic elements from the N pole to the S pole being coincided with the direction from the	<i>the direction of the magnetic flux from the N pole to the S pole of the second magnetic elements being coincided with the direction inward</i>	<i>the direction of the magnetic flux from the N pole to the S pole, each of the second magnetic elements at the corresponding</i>	<i>the direction of the magnetic flux from the N pole to the S pole of the second magnetic elements being coincided with the direction inward from the</i>

¹⁸ The Court renders its claim construction ruling without prejudice to LGE’s ability to formally challenge validity on indefiniteness grounds at a later stage.

¹⁹ The parties’ proposed constructions were modified at the *Markman* hearing and are reproduced herein pursuant to their post-hearing joint submission. (D.E. No. 244-1 at 2; D.E. No. 244-2 at 7-9).

ferromagnetic yoke to the objective lens holder”	<i>from the ferromagnetic yoke to the objective lens holder</i>	<i>tracking coil being coincided to the direction from where the second magnetic element is on the ferromagnetic yoke to the objective lens holder</i>	<i>ferromagnetic yoke to the objective lens holder</i>
“two third magnetic elements that have a magnetic flux direction from the ferromagnetic yoke to the objective lens holder”	<i>[two third magnetic elements] that have one or more magnetic flux directions inward from the ferromagnetic yoke to the objective lens holder</i>	<i>the two third magnetic elements, each having a direction of magnetic flux at the corresponding focusing coil that is from where the third magnetic element is on the ferromagnetic yoke to the objective lens holder</i>	<i>two third magnetic elements that have one or more magnetic flux directions inward from the ferromagnetic yoke to the objective lens holder</i>

ITRI argues that, it is appropriate “to say inward from the ferromagnetic yoke,” but improper to limit the disputed claim language to mean “inward from some particular point or some particular place on the ferromagnetic yoke.” (10/11/13 Tr. at 132:14-17). Thus, ITRI “believe[s] that everything is going from the yoke in to the lens” and that that the direction is inward “from the entirety of the surface of the yoke.” (*Id.* at 118:7-15; *see also id.* at 133:9-11 (“[T]he direction is inward from the yoke. The whole yoke, not the little tiny part of the yoke”). Finally, ITRI objects to incorporating the corresponding tracking/focusing coil limitations as being unsupported by the intrinsic evidence and improperly derived from disclosed embodiments. (ITRI Resp. Br. at 35-36).

LGE, however, contends that

it is the direction coming from where that magnet is inward that the ferromagnetic yoke that is holding the magnet inwards. Otherwise, it could, you could choose this direction or that direction. It becomes unclear which direction you are talking about even though you are identifying ferromagnetic yoke to the objective lens holder.

(10/11/13 Tr. at 115:15-22). Indeed, LGE explains that Claim 12 requires that the “magnetic element set” is “located on” the ferromagnetic yoke. (*Id.* at 114:9-15). Thus, LGE asserts that, “if we are talking about the magnet that is on this part of the ferromagnetic yoke, then we need to define the direction as that part of the magnetic yoke where the magnet is held or the objective lens is, otherwise we end up with multiple directions.” (*Id.* at 121:2-7). And, as to the corresponding tracking/focusing coil limitations, LGE contends that an “ordinary artisan would understand the claims to describe each magnetic element having a magnetic flux direction . . . as measured at the relevant location(s), *i.e.*, the focusing or tracking coil corresponding to the magnetic element.” (LGE Open. Br. at 43-44).

A “patentee is free to choose a broad term and expect to obtain the full scope of its plain and ordinary meaning unless the patentee explicitly redefines the term or disavows its full scope.” *Thorner*, 669 F.3d at 1367. Here, LGE seemingly asks the Court to rewrite claim language and incorporate certain limitations based on disclosed embodiments and LGE’s expert testimony, not lexicography or disavowal. (*See, e.g.*, LGE Open. Br. at 44). But ITRI is entitled to the full scope of the claim language and the Court cannot limit scope to “preferred embodiment[s] or import . . . limitation[s] from the specification into the claims.” *See Kara Tech.*, 582 F.3d at 1348.

To be sure, the claim language requires that the “magnetic element set” be “located on the ferromagnetic yoke.” But the Court finds that adding additional limitations relating to magnetic flux direction requires more than embodiments and expert testimony. Indeed, ITRI’s

proposal (i.e., “inward from the ferromagnetic yoke to the objective lens holder”) comports with the claim language, the specification, and even LGE’s expert declaration that “the magnetic flux direction of each of these magnetic elements must point *inwards*.” (Horenstein Decl. ¶ 115 (emphasis added)).

Moreover, LGE’s proposals again seem premised on an indefiniteness argument:

That is why we define where you measure direction of the magnetic flux. And if you measure the direction of the magnetic flux at that location, it is pointing in that direction. And that is why we presented that as part of our claim construction, *because in order to be definite, you measure the direction there, and that is the direction it is pointing to.*”

(See 10/11/13 Tr. at 118:25-119:7 (emphasis added)). For the reasons set forth with respect to the previous two terms, the Court is unconvinced by LGE’s indefiniteness argument raised in connection with its claim construction proposals. The Court therefore adopts ITRI’s proposals for these three terms.²⁰

6. “placed in the two sides of the objective lens holder respectively and independent of each other” (Claim 18)

ITRI’s Proposal	LGE’s Proposal	Court’s Construction
<i>plain & ordinary meaning to a person skilled in the art</i>	<i>placed in two opposite sides of the lens holder and are disconnected from each other</i>	<i>placed in two opposite sides of the lens holder and are disconnected from each other</i>

ITRI argues that LGE’s proposal imports a “separateness” limitation even though “independent of” can refer to “operational independence,” as well as “physical or electrical independence.” (ITRI Open. Br. at 29). In other words, ITRI contends that the intrinsic evidence doesn’t necessarily mandate a “physical or electrical separation of the components.”

²⁰ The Court renders its claim construction ruling without prejudice to LGE’s ability to formally challenge validity on indefiniteness grounds at a later stage.

(*Id.*). And ITRI avers that, even though Claim 18 covers Figure 6, that doesn't mean it is limited to it. (*See* 10/11/13 Tr. at 137:6-8, 142:5-16). Finally, ITRI argues that the focusing coils do not need to be disconnected to achieve tilting, but rather there simply needs to be a "difference in current." (*Id.* at 140:9-15).

LGE argues, however, that "independent of" means that the focusing coils are "disconnected from each other so they can be independently driven with different current[s] to generate different Lorentz forces to tilt the objective lens holder." (LGE Open. Br. at 45-46). LGE avers that the claim language supports its proposal because "independent of each other" relates to a particular electrical configuration of the focusing coils. (*Id.* at 46). LGE relies on Figure 6 and its description in the specification, arguing that the only use of the word "independent" in the specification relates to Figure 6 where the focusing coils are disconnected. (*Id.*). LGE contrasts this with Figure 5 where the focusing coils are "coupled in series" and connected. (*Id.*). Finally, LGE asserts that ITRI's certification of correction sought changes to make Claim 18 "more clearly comport" with Figure 6. (*Id.* at 47 (quoting Ex. 10 to Cangro Decl.) (internal textual modifications omitted)).

The issue raised by the parties' arguments is whether "independent of" necessarily means disconnected. Indeed, ITRI's view seems to be that "independent of" encompasses both connected and disconnected coils. Thus, ITRI's proposal to adopt the plain and ordinary meaning does not resolve the parties' dispute. *See O2 Micro Int'l Ltd*, 521 F.3d at 1361 ("A determination that a claim term 'needs no construction' or has the 'plain and ordinary meaning' may be inadequate when a term has more than one 'ordinary' meaning or when reliance on a term's 'ordinary' meaning does not resolve the parties' dispute.").

The patentee is entitled to the full scope of the plain and ordinary meaning of a term absent lexicography or disavowal. *Thorner*, 669 F.3d at 1366. But it is improper to construe claim language to encompass a broader scope than contemplated by the claim language and the specification. See *Ecolab, Inc. v. Paraclipse, Inc.*, 285 F.3d 1362, 1374 (Fed. Cir. 2002) (“The specification does not suggest that we should construe [the claim] more broadly than its language suggests.”). Notably, “the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the widely accepted meaning of commonly understood words.” *Phillips*, 415 F.3d at 1314.

Here, the claim language “independent of” conjures up an element of separateness or disconnection—and ITRI does not explain why the patent requires the Court to deviate from this. Although ITRI suggests that the focusing coils can just have “operational independence” (without necessarily being physically disconnected), ITRI does not proffer any intrinsic or extrinsic *evidence* as to how the coils can have such independence without being physically or electrically independent. To be sure, it seems conceivable that tilting can be achieved by a difference in current (and not necessarily an absence of current). But ITRI fails to present evidence that two different currents can be sent to two *connected* focusing coils.

Rather, the claim language suggests disconnection: “each of the focusing coils has two focusing wire contacts connecting to one of the suspension wires.” And, disconnection seems consistent with the written description: “The two focusing coils **32** which are placed in the two sides of the objective lens holder **20** respectively are independent. Each of the focusing coils **32** has two focusing wire contacts which connect to a suspension wire.” (’384 Patent at 5:15-19). Although this description relates to Figure 6, the Court finds that this is an instance where the

claim language and disclosed embodiment are coextensive, especially given ITRI's representations when seeking its Certificate of Correction. *See Phillips*, 415 F.3d at 1317, 1323 (explaining that it is “entirely appropriate for a court, when conducting claim construction, to rely heavily on the written description for guidance as to the meaning of the claims” and recognizing that, in certain situations, “it will become clear [that] the patentee . . . intends for the claims and the embodiments in the specification to be strictly coextensive”).

In sum, although the patentee is entitled to the full scope of “independent of,” ITRI advocates for a construction that is broader than the plain and ordinary meaning of this term without any supporting evidence. The Court therefore adopts LGE's proposal.

7. The two “suspension wires” terms (Claim 18)

Terms	ITRI's Proposals	LGE's Proposals	Court's Construction
“each of the focusing coils has two focusing wire contacts connecting to one of the suspension wires”	<i>plain & ordinary meaning to a person skilled in the art</i>	<i>each of the two focusing coils has two wire contacts connecting to a respective one of the suspension wires</i>	<i>each of the two focusing coils has two wire contacts connecting to a respective one of the suspension wires</i>
“the tracking coils are series connection and connect to the other two electric contacts corresponding to the other two suspension wires”	<i>tracking coils are coupled in a series and connect to the other two electric contacts corresponding to the other two suspension wires</i>	<i>the tracking coils are connected to each other in series and connect to the two electric contacts corresponding to the two suspension wires not connected to the two focusing coils</i>	<i>the tracking coils are connected to each other in series and connect to the two electric contacts corresponding to the two suspension wires not connected to the two focusing coils</i>

ITRI argues that the intrinsic evidence does not support limiting the disputed terms as LGE proposes. (ITRI Open. Br. at 30). ITRI suggests that LGE impermissibly limits the claim language to an embodiment—but that “nothing in the intrinsic evidence of the [']384 patent expressly disclaims all other possible designs (e.g., both focus wires are attached to one of the suspension wires).” (*Id.*). ITRI contends that, by requiring the two focusing coils to connect to “a respective one of the suspension wires,” LGE improperly “precludes a product using a series connection.” (ITRI Resp. Br. at 39).

LGE argues, however, that its proposals are consistent with how an ordinary artisan “would understand the ‘arithmetic’ of the claim limitations.” (LGE Open. Br. at 47). It explains that the claim explicitly calls for six electric contacts and six suspension wires corresponding to the six contacts. (*Id.* at 47-48). LGE contends that, since the tracking coils are “series connection,” they account for the two wire contacts corresponding to two of the six suspension wires. (*Id.* at 48). Thus, LGE avers that the two disconnected focusing coils (each having two contacts) match up with the remaining four suspension wires. (*Id.*).

The Court finds that LGE’s proposals comport with the claim language. Claim 18 explicitly requires, *inter alia*, the following limitations: (1) six suspension wires; (2) two focusing coils; (3) “each of the focusing coils [having] two focusing wire contacts connecting to one of the suspension wires”; and (4) two tracking coils being in a “series connection” that “connect to *the other two* electric contacts corresponding to *the other two* suspension wires.” (’384 Patent at 7:28, 8:47-56 (emphasis added)). Although ITRI seems to argue that the claim contemplates a scenario in which both focusing coils can connect to just one of the suspension wires, accepting such a proposal would ignore the requirement that the two tracking coils “connect to *the other two* electric contacts corresponding to *the other two* suspension wires.” In

other words, the claim uses the language “the other two,” indicating that *only* two of the six suspension wires remain.

ITRI complains that accepting LGE’s proposals effectively limit the claim language to a disclosed embodiment, *i.e.*, Figure 6. Furthermore, ITRI avers that LGE’s proposal “effectively precludes a product using a series connection” and that the “specification clearly discloses a claimed invention that uses a series connection.” (ITRI Resp. Br. at 39). But, “[i]t is not necessary that each claim read on every embodiment.” *Baran v. Med. Device Techs., Inc.*, 616 F.3d 1309, 1316 (Fed. Cir. 2010). Indeed, the Court construes the disputed language given the express claim limitations, not just Figure 6. Simply because the claim scope here is commensurate with a disclosed embodiment does not necessarily mean the Court is improperly confining the scope to a disclosed embodiment. The Court accordingly adopts LGE’s proposals.

8. The two “located on” terms (Claims 12 & 18)²¹

Terms	ITRI’s Proposals	LGE’s Proposals	Court’s Constructions
“located on”	<i>plain & ordinary meaning to a person skilled in the art</i>	<i>held by</i>	<i>plain & ordinary meaning to a person skilled in the art</i>
“movably located on [...]”	<i>plain & ordinary meaning to a person skilled in the art</i>	<i>held by the [...] and capable of being moved relative to the [...]</i>	<i>plain & ordinary meaning to a person skilled in the art</i>

ITRI argues that these terms have “commonly understood meanings” and the Court need not construe them unless the patentee provides a different meaning or disavows the customary meaning. (ITRI Open. Br. at 31). ITRI asserts that LGE’s proposals “seek[] to imply a structural connection not supported by the evidence.” (ITRI Resp. Br. at 34).

²¹ The parties agreed that no oral argument at the *Markman* hearing was required for these two terms. (D.E. No. 188 at 3 & 7).

LGE counters that ITRI fails to show how LGE’s proposals conflict with the ordinary and customary meaning of these terms. (LGE Resp. Br. at 35-36). LGE argues that “located on” means “held by” because the patent describes the use of a screw and screw holes to couple the side flanges of the ferromagnetic yoke, damper holder and printed circuit board together. (LGE Open. Br. at 48-49). LGE explains that the side flanges “aim to hold” the magnets, damper holder, and printed circuit board. (*Id.* (quoting ’384 Patent at 2:52)). And, as to “movably located on,” LGE argues as follows: “By positioning the objective lens holder 20 between the side flanges 12 and with respect to the inner yokes 111, the objective lens holder 20 is held by the yoke, but permitted to move relative to the yoke (and the magnets attached thereto).” (*Id.*).

The Court refuses to adopt LGE’s proposals. The patentee did not use “held by” and rewriting the claim this way requires lexicography or disavowal. *See Thorner*, 669 F.3d at 1365-66. LGE essentially relies on descriptions of preferred embodiments, (*see* LGE Open. Br. at 49), but this is insufficient. *See Thorner*, 669 F.3d at 1365-66. The Court finds that the patentee is entitled to the full scope of these terms and adopts the plain and ordinary meaning of the disputed language.

9. “inner yokes” (Claims 12 & 18)²²

ITRI’s Proposal	LGE’s Proposal	Court’s Construction
<i>plain & ordinary meaning to a person skilled in the art</i>	<i>yokes disposed within the interior space of the ferromagnetic yoke</i>	<i>plain & ordinary meaning to a person skilled in the art</i>

ITRI argues that the word “inner” has a common meaning and that LGE improperly proposes a “positional limitation.” (ITRI Open. Br. at 30). ITRI further contends that the claim

²² The parties agreed that no oral argument at the *Markman* hearing was required for this term. (D.E. No. 188 at 3 & 7).

language “clearly informs that the ‘inner yokes’ are located on the ‘ferromagnetic yoke’, making LG[E]’s construction unnecessary.” (ITRI Resp. Br. at 39).

LGE argues, however, that Figures 1, 4A and 4B show that the inner yokes are disposed within the interior space between the side flanges of the ferromagnetic yoke. (LGE Open. Br. at 49). LGE asserts that “every single embodiment in the patent exhibits this relationship and supports LGE’s construction.” (LGE Resp. Br. at 35).

The Court cannot limit the disputed claim language on the basis that all the figures and embodiments support LGE’s proposal. *See Thorner*, 669 F.3d at 1365-66. The Court finds that the patentee is entitled to the full scope of these terms and adopts the plain and ordinary meaning of this term.

10. “surrounded with” (Claims 12 & 18)²³

ITRI’s Proposal	LGE’s Proposal	Court’s Construction
<i>plain & ordinary meaning to a person skilled in the art</i>	<i>enclosed by</i>	<i>plain & ordinary meaning to a person skilled in the art</i>

ITRI argues that this term has a plain and ordinary meaning and that LGE’s proposal “merely evidences an attempt to have it replaced with a different term” that would facilitate a non-infringement argument. (ITRI Open. Br. at 31). ITRI speculates that LGE “wants to change the word to ‘enclose’ so it can argue the objective lens must be entirely enclosed within the space by the surrounding structures.” (*Id.* at 32). ITRI asserts that LGE offers no intrinsic support to advance its proposal. (ITRI Resp. Br. at 40).

LGE explains that Figure 1 shows that tracking coils are enclosed by inner yokes and that its proposal is consistent with the ordinary meaning of “surrounded.” (LGE Open. Br. at 50).

²³ The parties agreed that no oral argument at the *Markman* hearing was required for this term. (D.E. No. 188 at 3 & 7).

LGE argues that ITRI provides no evidence showing that LGE’s proposal conflicts with the ordinary and customary meaning of the disputed claim language or the intrinsic record. (LGE Resp. Br. at 35-36).

Although “surrounded with” and “enclosed by” seem close in scope, the Court must reject LGE’s attempt at rewriting claim language based on disclosed embodiments. *See Thorner*, 669 F.3d at 1365-66. The Court finds that the patentee is entitled to the full scope of “surrounded with” and adopts the plain and ordinary meaning.

V. Conclusion

For the reasons set forth above, the Court construes the disputed claim terms as indicated. An appropriate Order accompanies this Opinion.²⁴

s/Esther Salas
Esther Salas, U.S.D.J.

²⁴ In providing the constructions in this Opinion, the Court relies on the parties’ briefing, all accompanying exhibits and declarations, and the parties’ oral argument at the *Markman* hearing. In the interests of fairness and judicial economy, however, the Court does not rely on the parties’ slide presentations presented at the *Markman* hearing. (10/10/13 Tr. at 147:14-21). Furthermore, the Court notes that some of the arguments presented during the *Markman* hearing were not earlier disclosed in claim construction briefing or, for instance, via expert testimony. (10/11/13 Tr. at 142:24-143:8 (noting the issue of new arguments being raised during the hearing)). Nevertheless, neither party has requested supplemental briefing and the Court has endeavored to provide the parties with a full and fair opportunity to present their arguments—whether through briefing or oral argument.